

1. (Currently Amended) An alcohol sensor utilizing a work function measurement principle comprising at least one gas-sensitive field-effect transistor which comprises at least one substrate having source and drain areas and at least one gate electrode located at a distance from the source and drain areas such that a vacant space between the gate electrode on the one hand and the source and drain areas on the other hand is formed,

wherein an alcohol detecting gas-sensitive layer ~~for detecting alcohol~~ comprising a polymer or an inorganic metal oxide is applied to the gate electrode such that the vacant space is located between the gas-sensitive layer on the one hand and the source and drain areas on the other hand.

2. (Currently Amended) The alcohol sensor according to claim 1, wherein the alcohol detecting gas-sensitive layer comprises a polymer and is selected from the group consisting of polysiloxane or and a polysilsesquioxane derivative.

3. (Cancelled)

4. (Original) The alcohol sensor according to claim 1, wherein the metal oxide is scandium oxide (Sc₂O₃).

5. (Original) The alcohol sensor according to claim 1, further comprising an electrical heater.

6. (Original) The alcohol sensor according to claim 1, having an operating temperature in the range of between about room temperature and above 60°C.

7. (Original) The alcohol sensor according to claim 1, further comprising a plurality of different gas-sensitive layers.

8. (Original) The alcohol sensor according to claim 7, wherein a gas-sensitive layer is alcohol-sensitive and moisture-sensitive.

9. (Previously Presented) The alcohol sensor according to claim 8, wherein the moisture effects of the alcohol-sensitive layer are compensated for by the essentially moisture-sensitive layer.

10. (Original) The alcohol sensor according to claim 1, further comprising a gas-insensitive transistor for compensating for temperature effects.

11. (Previously Presented) An alcohol sensor utilizing a work function measurement principle comprising at least one gas-sensitive field-effect transistor which comprises at least one substrate having source and drain areas and at least one gate electrode located at a distance from a gate region between the source and drain areas, said gate electrode being associated with a gas-sensitive layer comprising a polymer or an inorganic metal oxide and wherein the layer is applied separately to the substrate such that it is substantially opposite a gate region of the field-effect transistor thereby forming a gap there between, wherein the gas-sensitive layer comprises a polymer and is selected from the group consisting of polysiloxane or and a polysilsesquioxane derivative, wherein the polysilsesquioxane derivative is polycyclopentylsilsesquioxane.

12. (Previously Presented) An alcohol sensor utilizing a work function measurement principle comprising:

at least one gas-sensitive field-effect transistor which comprises at least one substrate having source and drain areas, at least one gate electrode located at a distance from the source and drain areas,

and a gas-sensitive layer, wherein the gas-sensitive layer comprises polycyclopentylsilsesquioxane.

13. (Currently Amended) The alcohol sensor according to claim 12, wherein the polysilsesquioxane derivative is polycyclopentylsilsesquioxane.

14. (Previously Presented) The alcohol sensor of claim 12, where the gas-sensitive layer is adjacent to the gate electrode.

15. (Previously Presented) The alcohol sensor of claim 12, where the gas-sensitive layer is adjacent to the source and drain areas.